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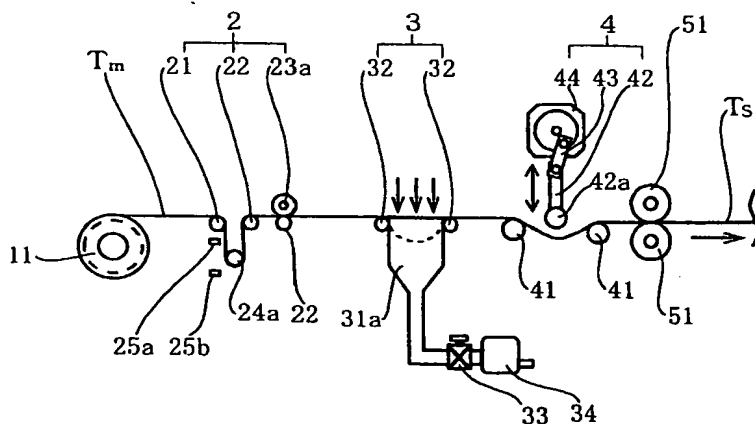
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(54) Title: METHOD OF PRODUCING A SPREAD MULTI-FILAMENT BUNDLE AND AN APPARATUS USED IN THE  
SAME



(57) Abstract: A method of producing  
a spread multi-filament bundle and  
an apparatus used in the same are  
provided, in which an arbitrary number of  
multi-filament bundles of higher strength  
are simultaneously spread with high  
speed and facility and a high-quality  
spread multi-filament bundle or sheet  
with the component monofilaments  
thereof aligned in parallel widthwise  
and uniformly distributed in density is  
produced with high efficiency. Such  
mechanism is adopted herein as the  
respective multi-filament bundles fed  
from a yarn supplier or a creel being  
subjected to the fluctuation of the tensile  
force applied thereto alternatively between  
tension and relaxation and the respective  
bundles as subjected to such fluctuation

being passed in succession through a fluid flowing spreader comprising a plurality of fluid flowing portions disposed in succession  
along the moving course of the respective bundles to be subjected to fluidal resistance so as to bend towards the direction to which  
a fluid flows and the fluid flowing through any adjacent component monofilaments of the respective bundles whose bonding is  
slackened due to such fluidal resistance so as to widely spread the respective bundles by the mutual action of such change of the  
tensile force and such fluidal resistance applied thereto.

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

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Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	JP 2003 213537 A (ICHINOMIYA ORIMONO:KK; EIHEIJI SIZING KK) 30 July 2003 (2003-07-30) paragraphs '0006!', '0007!', '0013!', '0014!', '0023!', '0029!', '0035!; figures 1,6	1
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-/-		

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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